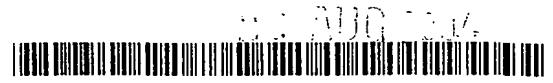


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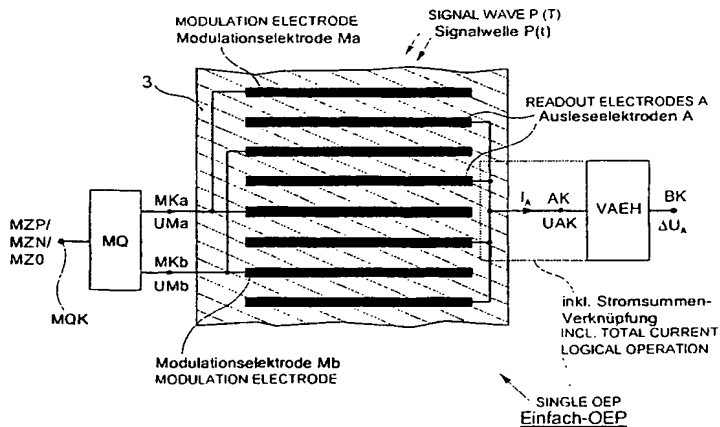
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(54) Title: METHOD AND DEVICE FOR DETECTING AND PROCESSING ELECTRIC AND OPTICAL SIGNALS

(54) Bezeichnung: VERFAHREN UND VORRICHTUNG ZUR ERFASSUNG UND VERARBEITUNG ELEKTRISCHER UND
OPTISCHER SIGNALE



(57) Abstract: The invention relates to a method for detecting and/or processing signal waves that produce charge carriers in an article sensitive to the signal waves, said charge carriers inducing a signal current in at least one readout electrode. At least two modulation electrodes are provided, at least one of which is disposed in the proximity of the at least one readout electrode or to another readout electrode in such a manner that, depending on the polarity sign of the modulation voltage of the respective modulation electrode, the current flowing across the associated readout electrode is positive or negative. The invention further relates to a device for detecting and processing signal waves. Said device comprises an OEP article that is sensitive to the signal waves, in which article the signal waves produce charge carriers, and at least one readout electrode (AK) that is linked with the

charge carrier range of the article. At least two modulation electrodes (MKa, MKb) are provided, at least one of which is disposed in the proximity of the at least one readout electrode (AK) and the other in the proximity either of the same readout electrode (AK) or of another readout electrode (AK2). The aim of the invention is to provide a method and a device that is capable of interlinking various optical and/or electronic signals in a logically digital or analogous manner or to detect the course of optical signals by scanning (time interval measurements). For this purpose, the modulation electrodes are modulated with relatively freely selectable voltage amplitude and/or phase relation, whereby the readout currents produced by the modulation voltages of the two modulation electrodes are additively coupled. The inventive device is characterized in that the modulation electrodes are disposed relative to the readout electrode(s) in such a manner that, depending on the polarity sign of the modulation voltages of the respective modulation electrode, the current flowing across the associated readout electrode is positive or negative and that at least one device is provided by which the relative phase relation and/or the voltage amplitude of the two modulation voltages can be freely adjusted.

(57) Zusammenfassung: Die vorliegende Erfindung betrifft ein Verfahren zur Erfassung und/oder Verarbeitung von Signalwellen, die in einem auf die Signalwellen empfindlichen Gegenstand Ladungsträger erzeugen, die in mindestens einer Ausleselektrode einen Signalstrom hervorrufen, wobei mindestens zwei Modulationselektroden vorgesehen sind, von denen mindestens eine in räumlicher Nähe zu der mindestens einen

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